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VOL. 22 No. 35 September 1, 1972

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Cooperative Economic Insect Report

Issued by
PLANT PROTECTION AND QUARANTINE PROGRAMS
ANIMAL AND PLANT HEALTH INSPECTION SERVICE
U.S. DEPARTMENT OF AGRICULTURE

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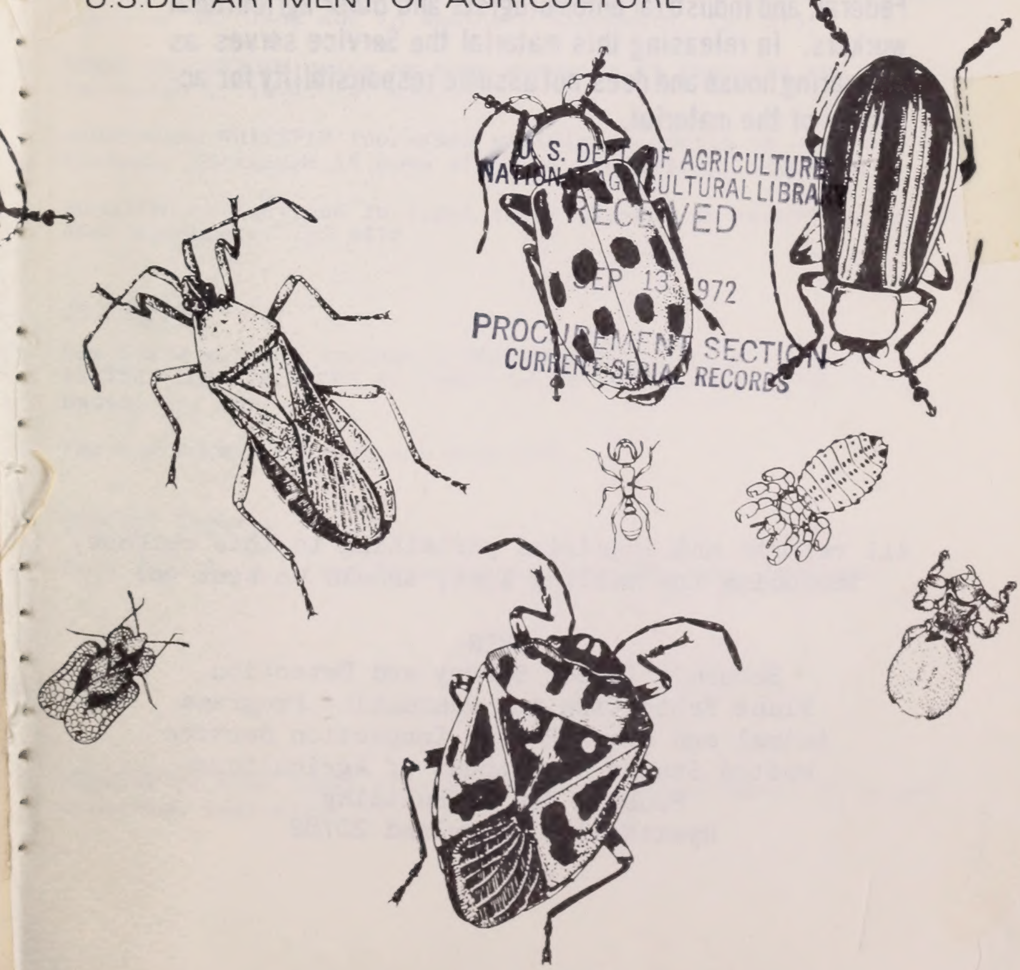

ANIMAL AND PLANT HEALTH INSPECTION SERVICE
PLANT PROTECTION AND QUARANTINE PROGRAMS
ECONOMIC INSECT SURVEY AND DETECTION STAFF

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Service serves as a clearing house and does not assume responsibility for accuracy of the material.

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Economic Insect Survey and Detection
Plant Protection and Quarantine Programs
Animal and Plant Health Inspection Service
United States Department of Agriculture
Federal Center Building
Hyattsville, Maryland 20782

Volume 22 September 1, 1972 Number 35

COOPERATIVE ECONOMIC INSECT REPORT

HIGHLIGHTS

Current Conditions

CORN EARWORM damage to corn increased rapidly on Eastern Shore f Maryland. Moth flights increased in southeastern Virginia. p. 573). SPOTTED ALFALFA APHID continued to increase and hreaten seedling alfalfa in Arkansas Valley of Colorado. p. 574).

CORN ROOTWORMS heavier in west-central district and lighter in other districts of Minnesota than in 1971; however, populations in southeast district of State still heavy enough to cause problems in 1973. NORTHERN CORN ROOTWORM caused extensive silk damage in western and central Ohio. (p. 574).

EUROPEAN CORN BORER adult flights increased throughout Eastern Shore of Maryland and in southern Wisconsin. (p. 575).

GREEN CLOVERWORM heavy on some soybeans in Kentucky and Indiana, increased in Iowa. (p. 576).

BANDEDWING WHITEFLY increased rapidly on cotton in central Alabama; increased in some areas of Mississippi. (p. 578).

MOSQUITO collections in light traps highest on record in southeast Minnesota. (p. 582).

Detection

New State records include a GRASSHOPPER in Maine (p. 579), WESTERN CORN ROOTWORM in Idaho (p. 574), and a CICADELLID in Hawaii (p. 585).

For new county records see page 579.

Special Reports

Boll Weevil, Selected References 1970-1971. (pp. 589-594).

Reports in this issue are for the week ending August 25 unless otherwise indicated.

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WEATHER OF THE WEEK ENDING AUGUST 28

Reprinted from Weekly Weather and Crop Bulletin supplied by Environmental Data Service, NOAA.

PRECIPITATION: A cold, dry air mass pushed into the northern Great Plains early in the week. Showers and some locally severe thunderstorms occurred along the leading edge of the cold air. One of these dumped 1.30 inches of rain at St. Cloud, Minnesota, in 18 minutes Monday evening. At such intensity, rain does not fall as drops but as streams. Such downpours are called cloudbursts. In general, light to heavy showers fell over a wide bank in the vicinity of the cold front which marked the leading edge of air dividing it from hot, humid air which cold dry air was replacing. Air mass thundershowers popped up in the warm, moist air that covered a large area extending from the southern Great Plains to New England. Light showers also spotted the northern and central Rocky Mountains and the western edge of the central Great Plains. Generous showers fell over the eastern two-thirds of Kansas, western Missouri, southeastern Nebraska, and southwestern Iowa Thursday evening. The weekend brought widely scattered showers from southern California across the southern Rocky Mountains, the southern Great Plains, and the Deep South to the Atlantic Ocean; also from Minnesota and Iowa to southern New England. Amounts ranged widely from light sprinkles to an inch or more; Gainesville, Florida, received 9.61 inches in a 72-hour period ending Sunday morning. Most of the Great Basin received no rain during the week. Weather of the week continued on page 588.

CORN EARWORM (Heliothis zea) - DELAWARE - Adults ranged 2-6 per night in Sussex County blacklight trap collections. Corn ear infestations still light. (Burbutis). MARYLAND - Damage levels increased rapidly. First and second instar larvae predominate; damaged ear counts ranged 20-80 percent. Infestations heaviest in Kent, Queen Annes, Dorchester, and Talbot Counties. (U. Md., Ent. Dept.). VIRGINIA - Infestations on field corn in Wythe, Pulaski, and Montgomery Counties averaged 7.3 percent of ears infested in 6 fields surveyed. (Allen, Surles). Moth flights increased sharply at Holland, Nansemond County, and at Independent City of Petersburg. Growers in nearby areas should expect damage to susceptible crops next 10-14 days. Crops should be checked on 3-4 day schedule to prevent damage. (Allen). GEORGIA - Light to heavy on sorghum and soybeans over southern area. Ranged 0-8 per row foot on peanuts across peanut belt. (French). Damaged okra in Spalding County. (Tippins). MISSISSIPPI - Light, less than 1 per head, in Madison County grain sorghum. (Robinson). ARKANSAS - Increased on soybeans in all areas, but at economic levels in only few fields. Infestations occurred earlier than normal this year. (Boyer et al.). OKLAHOMA - Larvae in 10-65 percent of ears of field corn checked in Texas County; all stages noted. Ranged moderate to heavy in sorghum in Jackson County, especially in fields adjoining cotton. Ranged 3-8 per plant in peanuts checked in Marshall County. (Okla. Coop. Sur.).

MISSOURI - H. zea increased in sorghum in southeast area. Averaged 1 larva per head in some areas. (Jones). NEBRASKA - Unusually light in Dawson County; only 2 larvae observed in ears of 3,250 plants in 65 cornfields. (Pruess, Mayo). MINNESOTA - Infestation in corn averaged 20 percent in Wabasha County, 5 percent in Fillmore County, less than one percent in Winona and Houston Counties. (Minn. Pest Rpt.). UTAH - Very light in sweet corn in Cache County, very light to light in Box Elder County. (Knowlton).

CORN LEAF APHID (Rhopalosiphum maidis) - MAINE - Continued to increase on most corn; averaged 100+ per plant. A fungus sharply reduced most R. maidis infestations that may have been severe. No treatments advised. (Gall). WISCONSIN - Heavy in some cornfields in northwestern counties. Mostly under husks on ears or under leaf sheaths. Few exposed on or near silks. Predators (lady beetles, lacewing larvae, and syrphid larvae) heavy in every field surveyed. (Wis. Ins. Sur.). OKLAHOMA - Ranged 50-300 per terminal in 2 late-planted sorghum fields in Texas County. (Okla. Coop. Sur.). ARIZONA - Medium on sorghum in Pinal County. (Ariz. Coop. Sur.).

GREENBUG (Schizaphis graminum) - OKLAHOMA - Moderate to heavy on sorghum in Jackson, Tillman, Caddo, and Washita Counties. Parasitism moderate to heavy in these counties also. Greenbug ranged 0-200 per plant in 2 fields and 0-30 per plant in 10 fields in Texas County. Light in Cimarron County. (Okla. Coop. Sur.). KANSAS - Usually none but occasionally very light in sorghum. In fields in Gray, Ford, Meade, Grant, Stanton, Morton, Stevens, Haskell, and Seward Counties, greenbug found in only one field in Gray County (3 per plant). In fields surveyed in Butler, Cowley, Sumner, Harvey, and Sedgwick Counties, infestations (up to 50 per plant) found only in southern Butler County. (Bell). SOUTH DAKOTA - Decreased to very low levels on corn. Few small colonies of 50 aphids per 100 plants on grain sorghum near Geddes, Charles Mix County. (Jones, Kantack, Aug. 18).

SPOTTED ALFALFA APHID (Therioaphis maculata) - NEVADA - Early infestation of 1 per 5 plants present on 80 acres of alfalfa in Diamond Valley, Eureka County. (Harms). COLORADO - Found on alfalfa in all areas of Arkansas Valley; continued to increase. Ranged 10-5,000 per 100 sweeps; threat to seedling alfalfa. Severe damage and loss can occur, even to resistant varieties, in seedling stage. (Schweissing). KANSAS - Ranged from none up to 250 per 10 sweeps in alfalfa surveyed in southwest counties; Gray, up to 250 per 10 sweeps; Stanton, up to 5; Morton, none; and Seward, none. Very light in alfalfa examined in Stafford County; up to 10 per 10 sweeps. (Bell). NORTH DAKOTA - Collected from alfalfa in Bowman and McKenzie Counties; averaged 2 and 12 per 100 sweeps respectively. These are new county records. (Brandvik).

CORN, SORGHUM, SUGARCANE

CORN ROOTWORMS (Diabrotica spp.) - OKLAHOMA - D. virgifera (western corn rootworm) adults still light in most corn in Texas County. Averaged less than 1 per plant in most fields; ranged 1-6 per plant in one field. (Okla. Coop. Sur.). OHIO - D. longicornis (northern corn rootworm) adults ranged 0-8 per silk on field corn in 5 western and 2 central counties. Extensive damage to silks noted in Mercer, Darke, and Marion Counties. Percent damage by county (3-4 fields): Darke 60-85, Mercer 71-90, Van Wert 24-32, Paulding 5-10, Defiance 25, Williams less than 5, Marion 45-60; Delaware 28 (1 field). (Fox). INDIANA - D. virgifera adults taken in Noble, Lagrange, Whitley, Wabash, Cass, Carroll, and Tippecanoe Counties. These are new county records. (Meyer). MINNESOTA - Annual Diabrotica spp. survey completed. Populations heavier in west-central district than in 1971. Preliminary figures show lighter populations in other districts. Two-thirds of counties in southeast district had lighter populations than 1971; however, 55 percent of these counties still have populations that will cause problems in 1973. Lodging generally light this year. Few severely lodged fields seen in southeast district after heavy rains and strong winds. Poor pollination also observed in some late-planted corn fields in southeast district. Silk feeding obvious in some fields. (Minn. Pest Rpt.). SOUTH DAKOTA - D. virgifera adults ranged 8-10 per plant in field of late corn south of Canton, Lincoln County. Similar counts found in corn near Garretson, Minnehaha County, and near Corsica, Douglas County. Adults ranged 2-3 per plant on late corn in northern Moody County field. (Jones, Kantack, Aug. 18).

NORTH DAKOTA - D. undecimpunctata howardi (southern corn rootworm) adults, 1 per 100 plants, on corn in Bowman County. This is a new county record. (Brandvik). IDAHO - D. virgifera medium to heavy and damaged 6 acres of corn at Dayton, Franklin County. Collected July 27 by G.L. Cunningham. Determined by R.W. Portman. This is a new State record. (Portman).

DUSKY SAP BEETLE (Carpophilus lugubris) - IDAHO - This species and Cryptarcha ampla (a sap beetle) collected August 10 from hybrid sweet corn at Nampa, Canyon County, by H.W. Homan. C. lugubris determined by L.R. Gillogly and C. ampla by W.F. Barr. These are new county records. (Portman).

EUROPEAN CORN BORER (Ostrinia nubilalis) - MINNESOTA - Second-generation moths very active during recent hot weather. Light trap collections increased at Shakopee and Worthington. Night-time temperatures ideal for egg laying past 7 days. Current moth activity and egg laying about nil due to cooler temperatures. Second generation not expected to cause serious damage to field corn this season. (Minn. Pest Rpt.). WISCONSIN - Moth catches increased greatly in southern area blacklight traps last 7 days. Field dissections in Grant County showed only diapausing larvae and empty pupal cases. Emergence of first generation completed. First-generation larvae heavy in corn in Dunn, Pierce, St. Croix, Polk, Barron, and La Crosse Counties. Infested plants ranged 50-80 percent in fields surveyed. In some St. Croix County fields, 10 percent of stalks broken below ear. (Wis. Ins. Sur.).

KANSAS - First-generation O. nubilalis moths continued to decrease in blacklight traps in Brown and Republic Counties. Significant flight now occurring in Sedgwick County; probably second-generation moths; 105 trapped August 21. Second-generation pupa found in corn in Pottawatomie County. Late-planted corn in Brown County 5-95 percent infested with second-generation larvae. Late corn in Pottawatomie County 95 percent infested with 2-3 larvae per plant. Cornfield in Shawnee County 50 percent infested. Trace infestation found in cornfield in Stafford County. (Bell). MARYLAND - Adult flight increased throughout the Eastern Shore. Egg masses ranged 5-20 per 100 plants. Heaviest damage in no-till sweet corn with 20 percent infested ears. (U. Md., Ent. Dept.).

BANKS GRASS MITE (Oligonychus pratensis) - OKLAHOMA - Infested 7 of 11 cornfields checked in Texas County. Heavy (9-13 leaves) in 3 fields, one field moderate (2-6 leaves infested), and 3 fields light. Fields with heavy infestations in area from Guymon south and east toward Hitchland. Infested 5 of 11 sorghum fields; one moderate (6-9 leaves infested), others light (1-3 leaves infested). (Okla. Coop. Sur.).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - IDAHO - Caused severe damage to many Canyon County fields of sweet, silage, and seed corn by August 11. Many fields required controls for first time in many years by August 18. (Homan).

SMALL GRAINS

HESSIAN FLY (Mayetiola destructor) - MONTANA - Infested 30-50 percent of spring wheat plants in 200-acre field in Sheridan County. (Pratt). NORTH DAKOTA - Puparia averaged 4 per 100 tillers in field of spring wheat in Bowman County. (Brandvik).

ENGLISH GRAIN APHID (Macrosiphum avenae) - MONTANA - Ranged 40-50 per head on 400 acres of spring wheat in Wibaux County. (Pratt, Aug. 18).

TURF, PASTURES, RANGELAND

FALL ARMYWORM (Spodoptera frugiperda) - MISSISSIPPI - Medium in 50 acres of millet in Walthall County. Also heavy in 100 acres and killing grass in some Bahia pastures and turf grazing crops. (Estess, Locke, Aug. 18). Current damage heavy to pasture grasses on 800 acres in Madison County and on 8 farms in Scott County. Athletic field grasses and several lawns destroyed in Madison County. (Robinson).

BLUEGRASS BILBUG (Sphenophorus parvulus) - NEBRASKA - Adults 69, larvae 9, and pupae 3, taken in 5 square feet of one Douglas County sodfield. (Kindler).

FORAGE LEGUMES

PEA APHID (Acyrthosiphon pisum) - IDAHO - Ranged from few to 5,000 per sweep in alfalfa; yields reduced in southern area. Many heavy damaging populations occurred in fields where organophosphate insecticides applied for alfalfa weevil control. Few predators and parasites present. (Portman et al.). KENTUCKY - Increased in certain areas of State. Averaged 1,000 per 100 sweeps of alfalfa at one Fayette County location. Predators relatively heavy. (Barnett).

ALFALFA LEAF BLOTCH-MINER (Agromyza frontella) - MASSACHUSETTS - Infestation near 25 percent on 3-week-old alfalfa in Berkshire County. (Jensen).

ALFALFA CATERPILLAR (Colias eurytheme) - IDAHO - Larvae, 60-80 per sweep, severely damaged alfalfa hay in 80-acre area in Elmore County. (Edwards).

ALFALFA WEEVIL (Hypera postica) - NORTH DAKOTA - Still present in irrigated 12-inch, third-crop alfalfa in McKenzie County. Larvae ranged 65-95 (averaged 78) per 100 sweeps. Old and new adults present, 17 per 100 sweeps, in same fields. (Brandvik).

BLACK BLISTER BEETLE (Epicauta pennsylvanica) - WISCONSIN - This species along with grasshoppers comprised total insect population in many alfalfa fields. This predator of grasshopper eggs most noticeable in Iowa and Sauk Counties; ranged 5-10 per 10 sweeps. (Wis. Ins. Sur.).

GRASSHOPPERS - WISCONSIN - Still heavy in isolated alfalfa fields in Iowa, northern Grant, Monroe, Sauk, eastern Vernon, and La Crosse Counties. Feeding damage scarcely noticeable. (Wis. Ins Sur.).

SOYBEANS

MEXICAN BEAN BEETLE (Epilachna varivestis) - VIRGINIA - Generally light in 35 fields examined, except in 2 fields near economic level. On about 591 acres surveyed in Middlesex County, adults per 30 linear feet averaged 10.5 in no-till soybeans, 35.5 in conventionally planted soybeans. Most new adults; will begin egg laying soon, resulting in sharp increase in populations and subsequent defoliation. (Allen, Egan). KENTUCKY - Moderate to heavy on soybeans in western areas. Adults averaged 39 per 360 row feet. (Barnett, Raney).

GREEN CLOVERWORM (Plathypena scabra) - KENTUCKY - Heavy on soybeans in western areas. Larvae averaged 400 per 360 row feet. Very heavy in Hancock County, larvae averaged 5 per linear row foot in 100-acre field. Controls applied. Also heavy in Logan County. (Barnett, Raney). INDIANA - Larvae of this species and adults of Epicauta vittata (striped blister beetle) heavy in two Jefferson County, soybean fields. Controls applied. (Sanders). IOWA - P. scabra larval population increased, averaged 0.5 per sweep, in Story County fields. Still below economic levels. (Iowa Ins. Sur.).

BEET ARMYWORM (Spodoptera exigua) - GEORGIA - Ranged light to heavy on soybeans throughout southern area. (French).

BROWN STINK BUG (Euschistus servus) - KENTUCKY - This species and Acrosternum hilare (green stink bug) averaged 49 per 360 row feet of soybeans in western areas. (Barnett, Raney).

PEANUTS

REDNECKED PEANUTWORM (Stegasta bosqueella) - OKLAHOMA - Heavy in most peanut-growing areas of State this year, except light in Love County. Currently ranged up to 82 per 100 terminals in fields checked in Caddo County. (Okla. Coop. Sur.).

LESSER CORNSTALK BORER (Elasmopalpus lignosellus) - OKLAHOMA - Infestations averaged 30 percent and 60 percent in 2 most heavily infested fields in southern Marshall County. (Okla. Coop. Sur.).

TWOSPOTTED SPIDER MITE (Tetranychus urticae) - MISSISSIPPI - Heavy infestations spreading over 40 percent of peanut acreage in Coahoma County. Many fields damaged, plants drying. (Robinson).

COTTON

BOLL WEEVIL (Anthonomus grandis) - TENNESSEE - Damaged squares ranged 2-57 percent in western area. Most cotton stopped squaring. (Locke, Patrick). In Tipton County, some fields have 100 percent punctured squares. In some cases, controls unsuccesful; however, if small bolls protected, good crop expected. (Gordon). SOUTH CAROLINA - Infestation levels in Florence area remained low. Larval infestations ranged 1-8 percent in treated plots, 13-18 percent in control plots. Adults per acre ranged 0-764 in treated plots, 272-1,376 in control plots. (Taft et al., Aug. 23). GEORGIA - Percent punctured squares by county: Burke, ranged up to 87, averaged 6; Dooly, ranged up to 50, averaged 5; Wilcox, ranged 0-18; Crisp, ranged 0-7. (Barry et al.). MISSISSIPPI - Generally light over State. Heavy on plants that are squaring. Average percent punctured squares in selected counties: Bolivar 6 in "hot spots"; Grenada 14.9; Noxubee 4-8 in 1,000 acres; Covington 1.9; Lincoln 0.65; Jones 1.9. (Robinson). OKLAHOMA - Percent punctured squares by county: Wagoner 1-15, Muskogee 1-30, Bryan 1-44, Love 3-8, Grady 48-68 in Chickasha area, Tillman 3-36, Harmon 0-18; averaged 11, ranged up to 40, percent in Jackson County; averaged 10 percent in Marshall County. Light in Kiowa, Cotton, and Jefferson Counties. (Okla. Coop. Sur.).

BOLLWORMS (Heliothis spp.) - TENNESSEE - H. zea damaged squares ranged 1-3 percent in western area. Larvae ranged 1-2 per 100 terminals. (Locke, Patrick). NORTH CAROLINA - H. zea heavy in some Robeson County fields near early maturing corn. Heavy damage restricted mostly to fields where improper controls made. (Williford). SOUTH CAROLINA - Heliothis spp. activity decreased in Florence area. Larval infestations ranged 2-32 percent in treated plots, 11-33 percent in control plots. Adults in 3 light traps: H. zea 243, H. virescens 7. (Taft et al., Aug. 23). GEORGIA - Counts per 100 terminals by county: Burke, ranged up to 30 larvae, averaged 3; Dooly, ranged up to 20 larvae, averaged 3; Wilcox, ranged 8-45 eggs and 0-9 larvae; Crisp, ranged 6-97 eggs and 0-29 larvae. (Hudson et al.). MISSISSIPPI - Egg laying continued moderate to heavy in most areas. Larval infestations light; control good. (Robinson). ARKANSAS - Adults moderate to heavy in southeast, central, and southwest areas, light in extreme northeast area. H. virescens heavy in localized areas of southeast part of State. (Boyer). OKLAHOMA - Percent squares damaged by H. zea by county: Wagoner 1-6, Muskogee 1-8, Bryan 1-12, up to 40 in Caddo and Washita, 8-20 in Grady, averaged 8 in Marshall and Love; southwest area 0-8. Eggs present in most areas; ranged 1-12 per 100 terminals except in Bryan County where counts up to 144 per 100 terminals found. (Okla. Coop. Sur.). ARIZONA - H. zea infestations increased slightly in Graham and Yuma Counties. Treatment planned in Yuma County. (Ariz. Coop. Sur.).

CABBAGE LOOPER (Trichoplusia ni) - ALABAMA - Larvae feeding on leaves throughout southern and central areas and as far north as Marion County. Two fields in Elmore County show 65-70 percent defoliation. Virus disease reducing population in central part of State. Moth flights heavy in Dallas, Elmore, and other counties; eggs 100-300 per 100 stalk terminals. (Price et al.). NEW MEXICO - Damaged cotton foliage in Columbus area, Luna County. (N.M. Coop. Rpt.).

BANDEDWING WHITEFLY (Trialeurodes abutilonea) - ALABAMA - Exploding populations of mixed ages occurred in cotton in Elmore, Dallas, Lee, and Russell Counties. Infestations reported statewide. (McQueen). MISSISSIPPI - Increased slightly in some areas. Heaviest in field margins. Infestations by county: Madison, light in 250 acres; Rankin, spotty; Sunflower, light to moderate in 200 acres; Tallahatchie, very heavy on 300 acres, moderate on 600 acres. (Robinson).

TOBACCO

TOBACCO HORNWORM (Manduca sexta) - MARYLAND - Controls applied in most of 4,000 acres of Calvert County tobacco. Light to moderate outside this area. (U. Md., Ent. Dept.).

VARIEGATED CUTWORM (Peridroma saucia) - VIRGINIA - Severely damaged lower leaves in field of flue-cured tobacco in Chesterfield County. (Allen, Jennings).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - KENTUCKY - Adults heavy on tobacco in Madison County, averaged 1.9 per leaf. Generally lower than past years. (Barnett).

MISCELLANEOUS FIELD CROPS

SUNFLOWER MOTH (Homoeosoma electellum) - NEBRASKA - Larvae, 2-15 per head, infested 100 percent of sunflowers in late-planted field near Schuyler, Colfax County. (Keith et al.).

POTATOES, TOMATOES, PEPPERS

Potato Aphids in Maine - Average counts per plant (by 3-leaf method) for 150 plants in 6 plots of untreated potatoes at Aroostook Farm, Aroostook County: Aphis nasturtii (buckthorn aphid) 9.8; Myzus persicae (green peach aphid) 2.5; Macrosiphum euphorbiae (potato aphid) 0.7. Winged A. nasturtii general, including fall forms returning to buckthorn. Few winged M. persicae found; indicates some movement from field to field. Fungi still heavy on M. euphorbiae; some parasites still active. Limited top killing of plants begun in all areas. (Gall).

FALL ARMYWORM (Spodoptera frugiperda) - MONTANA - Ranged 5-8 per plant in 40-acre potato field at Waterloo, Madison County. (Pratt).

COLE CROPS

BEET ARMYWORM (Spodoptera exigua) - NEW MEXICO - This species and Trichoplusia ni (cabbage looper) problem in Dona Ana County lettuce fields. Controls applied. (N.M. Coop. Rpt.).

GENERAL VEGETABLES

SWEETPOTATO WEEVIL (Cylas formicarius elegantulus) - FLORIDA - Adults heavy in stems, roots, and fruits of sweetpotato in 8-acre planting at Grand Ridge, Jackson County. (Miller).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - OHIO - Adults very heavy on peppers, squash, melons, pumpkins, and cucumbers in Delaware County. Damage light to heavy on all squash and melon leaves in one area. Lighter on Huron County cucumbers; feeding damage ranged from very light to moderate on about every other leaf. Adults ranged 1-2 per plant on lima beans in Huron County. (Fox).

EGGPLANT FLEA BEETLE (Epitrix fuscula) - OHIO - Heavy, adults ranged 6-25 per plant, on eggplants in Huron County. All leaves damaged; about one-third appeared "peppered with shot." (Fox).

DETECTION

New State Records - A GRASSHOPPER (Metrioptera roeselii) - MAINE - Nymphs and adults common at Kittery, York County, July 9 and 12, and at York, York County, July 19. Collected and determined by E.K. Ede. (Gall).

A CICADELLID (Carneocephala sagittifera) - HAWAII - Hawaii Island (p. 585). WESTERN CORN ROOTWORM (Diabrotica virgifera) - IDAHO - Franklin County. (p. 574).

New County Records - BROWN RECLUSE SPIDER (Loxosceles reclusa) KENTUCKY - Fayette (p. 582). COMSTOCK MEALYBUG (Pseudococcus comstocki) CALIFORNIA - Kern (p. 583). DUSKY SAP BEETLE (Carpophilus lugubris) IDAHO - Canyon (p. 574). EULOPHID WASPS - Sympiesis viridula - INDIANA - Rush. Tetrastichus julis - MICHIGAN - Iosco, Livingston, Oscoda (p. 582). FACE FLY (Musca autumnalis) NORTH CAROLINA - Chatham (p. 581). MOSQUITOES - Aedes dorsalis, A. cantator, A. sollicitans, Culex tarsalis, Culiseta minnesotae - OHIO - Lorain (p. 582). RED IMPORTED FIRE ANT (Solenopsis invicta) MISSISSIPPI - Sunflower (p. 584). A SAP BEETLE (Cryptarcha ampla) IDAHO - Canyon (p. 574). SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) NORTH DAKOTA - Bowman (p. 574). SOYBEAN CYST NEMATODE (Heterodera glycines) MISSISSIPPI - Calhoun, Marshall. ILLINOIS - White. TENNESSEE - Lawrence (p. 584). SPOTTED ALFALFA APHID (Therioaphis maculata) NORTH DAKOTA - Bowman, McKenzie (p. 574).

DECIDUOUS FRUITS AND NUTS

CODLING MOTH (Laspeyresia pomonella) - MARYLAND - First-generation larvae emerged from apples in Washington, Frederick, and Carroll Counties. Second-generation eggs expected first 14 days in September. September populations expected to be controlled with scheduled treatments. (U. Md., Ent. Dept.).

SHOTHOLE BORER (Scolytus rugulosus) - ALABAMA - Beetles, as secondary pests, became heavy and damaged several weak and dying apple trees in Lee and Randolph Counties. (Barwood).

SAN JOSE SCALE (Quadraspidiotus perniciosus) - OREGON - Unusually heavy in Wasco County cherry orchards. In many orchards, dead twigs seen, especially in tops of trees. Summer controls suggested. (Thienes).

EUROPEAN RED MITE (Panonychus ulmi) - MASSACHUSETTS - Built up rapidly in many orchards with onset of hot weather in Franklin, Hampshire, and Hampden Counties. (Jensen).

FALL WEBWORM (Hyphantria cunea) - ALABAMA - Larvae unusually heavy in many Butler County pecan trees. (Morgan).

PECAN WEEVIL (Curculio caryae)- ALABAMA - Damage seen in several pecan orchards in Bullock and Lowndes Counties. Some controls applied in Bullock County. (Stone, Gerald).

CITRUS

Insect Situation in Florida - Mid-August - CITRUS RUST MITE (Phyllocoptruta oleivora) infested 78 (norm 65) percent of groves; economic in 65 (norm 51) percent. Population attained summer peak in mid-August and in high range and above normal on leaves and fruit. Although decrease expected, numerous groves will continue to have important infestations. All districts high. TEXAS CITRUS MITE (Eutetranychus banksi) infested 56 (norm 44) percent of groves; economic in 33 (norm 21) percent. Population decreased, still above normal and in moderate range. Rapid decrease to low level expected. Highest districts west, central, and east. CITRUS RED MITE (Panonychus citri) infested 20 (norm 45) percent of groves; economic is 6 (norm 22) percent. At lowest August level in 21 years of record. Will remain very low and of little importance in all districts. BLACK SCALE (Saissetia oleae) infested 89 (norm 68) percent of groves; economic in 75 (norm 47) percent. Population decreased but still highest on record for August and in very high range. Gradual decrease expected. All districts are high. AN ARMORED SCALE (Unaspis citri) infested 38 (norm 27) percent of groves; economic in 27 percent. Population decreased from all-time high level reported last month. Slight temporary decrease expected. GLOVER SCALE (Lepidosaphes gloverii) infested 76 (norm 64) percent of groves; economic in 5 (norm 14) percent. Population below normal and in moderate range. Decrease expected. Highest district north. PURPLE SCALE (L. beckii) infested 62 (norm 56) percent of groves; economic in 3 (norm 4) percent. Near normal abundance and in low to moderate range in all districts. Will decrease until October. YELLOW SCALE (Aonidiella citrina) infested 28 (norm 50) percent of groves; none economic (norm 6 percent). CHAFF SCALE (Parlatoria pergandii) infested 42 (norm 46) percent of groves; none economic (norm 4 percent). These scales below normal and will occur only as light infestations. GREEN SCALE (*Coccus viridis*) infested 24 percent of groves; economic in 6 percent. Decreased and in low range. Population higher than any prior August on record. WHITEFLIES infested 77 percent of groves; economic in 24 percent. Population of larval form decreased, still in high range and above normal. Adult population also above normal and higher than larval population. Highest districts east and west. MEALYBUG population dropped into low range and will continue decrease. (W.A. Simanton (Citrus Expt. Sta., Lake Alfred)).

FOREST AND SHADE TREES

LARGER ELM LEAF BEETLE (*Monocesta coryli*) - GEORGIA - New infestations found in Morgan, Monroe, and Butts Counties. Many elms infested along 25-mile front in 10 lower Piedmont counties from Spalding County to Lincoln County; defoliation usually 100 percent. (Smith). ALABAMA - Many large elms along 4 creeks in Elmore County defoliated. (McQueen).

MIMOSA WEBWORM (*Homadaula anisocentra*) - KANSAS - Damage to mimosa and honeylocust unusually light in southeast district. Foliar damage generally severe in Manhattan, Riley County. Eggs, pupae, and large larvae abundant with some smaller larvae on honeylocust. (Bell).

MAN AND ANIMALS

SCREWWORM (*Cochliomyia hominivorax*) - Total of 4,272 confirmed cases reported in continental U.S. during period August 13-19 as follows: Texas 4,082; New Mexico 44; Arizona 101; Oklahoma 44; Colorado 1. Total of 1,082 cases confirmed in Mexico. Number of sterile flies released in U.S. this period totaled 204,608,000 as follows: Texas 169,220,000; New Mexico 8,960,000; Arizona 25,000,000; California 800,000; Arkansas 628,000. Total of 28,540,000 sterile flies released in Mexico. (Anim. Health).

FACE FLY (*Musca autumnalis*) - NORTH CAROLINA - Ranged up to 10 per head on cattle near Pittsboro, Chatham County. This is a new county record and most eastern occurrence of this pest in State. (Falter). KENTUCKY - Average per animal on cattle by county: Madison 14.2 and Fayette 8.2. (Barnett). MISSISSIPPI - Averaged 5 per face on 300 treated cattle in Monroe County. (Combs). MISSOURI - Ranged 5-31 (averaged 8.4) per head in northwest area. (Munson). MONTANA - Average counts per head on cattle: 4 in Billings area, Yellowstone County; 8 in Bozeman area, Gallatin County; 10 in Hamilton area, Ravalli County. Ranged 13-15 per head on horses in Bitter Root Valley. (Pratt, Aug. 18).

HORN FLY (*Haematobia irritans*) - MISSISSIPPI - Ranged 100-125 per head on herd of 175 beef cattle in Montgomery County. (Robinson). MISSOURI - Ranged 70-365, averaged 237, per animal in northwest area. (Munson). OKLAHOMA - Ranged 60-100 per head on cattle in Payne County, 300-500 per head in Marshall County. Heavy in Oklahoma and Pontotoc Counties, moderate in Atoka County. (Okla. Coop. Sur.). NEBRASKA - Ranged 500-3,000 per head in 3 untreated range herds in Keith and Lincoln Counties. (Campbell, McEvoy).

STABLE FLY (*Stomoxys calcitrans*) - WISCONSIN - Light to moderate annoyance to treated dairy cattle in most areas. Annoyance to humans heavy in portions of Walworth, Bayfield, Waukesha, Jefferson, and Dane Counties. (Wis. Ins. Sur.). NEBRASKA - Averaged 20 per leg on untreated animals in 2 Brown County feedlots and 15-20 per leg on untreated animals in 4 feedlots in Lincoln and Keith Counties. (Campbell, McEvoy).

HOUSE FLY (*Musca domestica*) - NEBRASKA - Heavily infested feedlot near Ainsworth, Brown County. Ranged 10-12 per Scudder grid in 4 Lincoln and Keith County feedlots. (Campbell, McEvoy). WISCONSIN - Heavy in the southern three-quarters of State. Severe nuisance in homes, at picnics, and cookouts. Numbers in dairy barns very heavy on farms where controls lacking or inadequate. Infestations on some farms in Columbia County reported heaviest ever known. (Wis. Ins. Sur.).

MOSQUITOES - OHIO - *Aedes dorsalis*, *A. cantator*, *A. sollicitans*, *Culex tarsalis*, and *Culiseta minnesotae* collected during period August 8-18 in Loraine County. These are new county records. Total of 4,414 mosquitoes taken; averaged 72.3 per trap per night, ranged 4-787 per trap. (Fox). WISCONSIN - Mosquitoes increased greatly past 7 days. Severe biting noted in Grant County State parks and in Dunn, Barron, Polk, and St. Croix County cornfields. Biting a problem in Dane, Walworth, Calumet, Trempealeau, Racine, and in parts of Bayfield Counties. Continued rains insure mosquito problem to last several weeks. Annoyance to cattle moderate in most areas. (Wis. Ins. Sur.). MINNESOTA - Light trap counts in Metropolitan Mosquito Control District August 12-18 highest on record. Total of 104,045 females from 16 traps; 35,000 males taken. *Aedes vexans* accounted for 95 percent of collection, *A. cinereus* 1.5 percent. Nuisance levels very high throughout most of State, probably as high as any time in recent years. Numbers decreased and cooler weather somewhat restricted activity. (Minn. Pest Rpt.).

BROWN RECLUSE SPIDER (*Loxosceles reclusa*) - MISSISSIPPI - Heavy in 3 homes in Prentiss County. (Smith, Aug. 18). KENTUCKY - Single immature and 4 females collected in warehouse at Lexington, Fayette County, June 12 by B. Runion. Determined by W.B. Peck. This is a new county record. (PP).

LONE STAR TICK (*Amblyomma americanum*) - OKLAHOMA - Still heavy on cattle in Atoka and Pontotoc Counties. (Okla. Coop. Sur.).

BENEFICIAL INSECTS

LADY BEETLES - OHIO - Averaged 1 per 2 linear feet of cucumbers in Huron County. Species, in order of predominance included: *Coleomegilla maculata*, *Hippodamia convergens*, and *Adalia bipunctata*. (Fox, Eischen).

EULOPHID WASPS - MICHIGAN - *Tetrastichus julis* recovered for new county records as follows: Iosco during June by M. Davenport; Livingston June 7 by D. Girbach; Oscoda June 19 by D. Olson. All determined by F.W. Stehr. Originally released in these counties June 9, 1971, as parasites of *Oulema melanopus* (cereal leaf beetle) larvae: Iosco by R. Britt; Livingston by D. Girbach; Oscoda by D. Olson. For recovery, *O. melanopus* larvae were collected and reared to full growth; if present, *T. julis* emerged. (Sauer). For previous records in State see CEIR 22(32): 528-529.(PP). INDIANA - One female and 2 male Sympiosis viridula recovered from burrow of Ostrinia nubilalis (European corn borer) July 26, in Rush County. Collected by R.W. Meyer. This is a new county record. This parasite released about 1946 in several counties and has since been recovered in Tipton, Jasper, Vermillion, Kosciusko, and Tippecanoe Counties. (Meyer).

A BRACONID (Apanteles congregatus) - NORTH CAROLINA - Parasitism of Manduca spp. (hornworms) on tobacco increased average of 10 percent at Bladen, Columbus County, at Wilson, Wayne County, and in Surry County. Parasitism heaviest, 64 percent, at Wilson, Wayne County. (Hunt).

FEDERAL AND STATE PLANT PROTECTION PROGRAMS

COMSTOCK MEALYBUG (Pseudococcus comstocki) - CALIFORNIA - New infestation found on mulberry trees on 21 city blocks in Delano, Kern County. Counts averaged 10 per leaf. Collected by T. Tandrow and R. Rockwell. Determined by R. Gill. This is a new county record. P. comstocki also occurs in Porterville, Springville, Strathmore, Lindsay, Terra Bella, and Exeter in Tulare County. Delano infestation about 20 miles from Porterville infestation. (Cal. Coop. Rpt.).

GRASSHOPPERS - INDIANA - Mainly Melanoplus spp. adults predominated over immatures in sandier portions of Porter, La Porte, and Lagrange Counties. Damage evident to leaves and corn silks in few weedy fields and also to poorly maintained alfalfa field. (Meyer). MINNESOTA - Adult survey underway. Very heavy infestations found on Olmsted and Dodge County line, 3 miles east of Oslo; ranged 100-150 per square yard in one alfalfa field. Counts high in other fields in immediate area. Some damage seen on adjacent soybeans. Alfalfa being cut; mass movement of grasshoppers from these fields expected. Most grasshoppers in area, as well as statewide, Melanoplus femurrubrum in fourth instar to adult. Other economic counts of 8 or more per square yard generally very widely scattered. (Minn. Pest Rpt.).

NORTH DAKOTA - Grasshopper adults noneconomic in Oliver, Hettinger, Divide, and Stutsman Counties. Light and economic infestations found in southern Morton County. Mostly noneconomic in Sioux County, occasionally light in western parts of county, and economic in central Grant County. Mostly noneconomic in Adams County, except for occasional light infestations in northeast. Infestations light and economic in central Williams County. Grasshoppers light in southern Kidder County. (Grasser). UTAH - Ranged 20-40 per square yard (90 percent nymphs) in some range areas in Lefthand Fork of Blacksmith Fork Canyon, Cache County, and 1-12 per square yard in other areas. (Knowlton).

GYPSY MOTH (Porthetria dispar) - WEST VIRGINIA - Male moth collected in trap in Hardy County August 21 by R. Clark. Determined by E.L. Todd. NORTH CAROLINA - Adult trapped August 4 at Campground near Kings Mountain, Cleveland County, by G.B. Lott. Adult trapped in log holding yard at Beaufort, Carteret County, August 7 by P.J. Lockerman. Determined by V.H. Owens. Confirmed by D.M. Weismann. Until further survey and investigations are completed to verify the nature of these situations, they will be considered as regulatory incidents. (PP).

RED IMPORTED FIRE ANT (Solenopsis invicta) - MISSISSIPPI - Collected at Moorehead, Sunflower County, August 7 by C.E. Wood. Determined by V.H. Owens. Confirmed by D.R. Smith. This is a new county record. (PP).

JAPANESE BEETLE (Popillia japonica) - PENNSYLVANIA - Total of 15,986 taken from one bait trap at Pennsylvania Furnace, Centre County, July 3 to August 23. At State College, Centre County, 1,105 adults taken in 16 bait traps at one location August 18-23. (Bierlein, Adams). TENNESSEE - Continued to damage favored hosts in local areas of Johnson County. (Hammett, Quillin).

ORIENTAL FRUIT FLY (Dacus dorsalis) - CALIFORNIA - Since June 1, when original female trapped at Santa Barbara, Santa Barbara County, total of 2,798 trap inspections made; no additional flies taken. Two toxic bait applications made within 6-square-mile core area. Two additional treatments scheduled. (Cal. Coop. Rpt.).

PINK BOLLWORM (Pectinophora gossypiella) - ARIZONA - Increased in Graham County cotton; some treatments made. Infestation 1-2 percent in Gila Valley cotton in Yuma County. (Ariz. Coop. Sur.). NEW MEXICO - Rosetted cotton blooms seen in 5 fields in Sunland Park area of Dona Ana County. (N.M. Coop. Rpt.).

SOYBEAN CYST NEMATODE (Heterodera glycines) - TENNESSEE - In random sampling, 37 percent of soil samples taken in soybean fields of western area found infested. Some fields show stunting symptoms; decrease in yield expected in many fields. (Ponchillia, Hooper). MISSISSIPPI - Collected on soybeans at Gore Springs, Calhoun County, July 17 by D. Pittman, and at Byhalia, Marshall County, July 21 by J. Brigance. ILLINOIS - Collected on soybeans at Springerton, White County, July 13 by D. Edwards. TENNESSEE - Collected on soybeans at Five Points, Lawrence County, August 15 by L.C. Green. Determined by V.H. Owens. Confirmed by A.M. Golden. These are new county records. (PP).

WOOLLY WHITEFLY (Aleurothrixus floccosus) - CALIFORNIA - Population increased in San Diego, San Diego County. Infestations spreading, homeowners concerned. Many parasite release sites in area of increased A. floccosus populations. Total of 326 release sites established. Parasite activity presently very low due to adverse weather. (Cal. Coop. Rpt.).

New State Record - Several adults of a CICADELLID (*Carneocephala sagittifera*) collected in various grasses at Kona, Hawaii, by S. Kashiwai and S. Kobayashi June 7. Determined by J.P. Kramer. Known to occur in Texas, Louisiana, Mexico, Puerto Rico, Cuba, and the West Indies. According to literature it has been found on several species of grasses and frequently in close association with sugarcane. It has not been noted commonly on sugarcane and has not been credited with transmission of any disease. (Kawamura).

Fruits and Nuts - CLOUDYWINGED WHITEFLY (*Dialeurodes citrifolii*) and *Bemisia giffardi* collected from citrus foliage at Nawiliwili, Kauai, in December 1971. This is first collection of these 2 species on island of Kauai. *D. citrifolii* previously recorded from Oahu and Hawaii; *B. giffardi* from Oahu, Maui, and Molokai. (Nakahara). Several additional adults of a SWALLOWTAIL BUTTERFLY (*Papilio xuthus*) observed over south and west Kauai indicating establishment of this citrus pest on this island. First discovered on Kauai at Poipu in June 1972. (Sugawa).

Ornamentals - Adults of a WEEVIL (*Brachyrhinus cribricollis*) moderate and caused light to moderate damage to chrysanthemum flowers in upper Kula, Maui. (Miyahira).

Beneficial Insects - Only traces of Klamath weed (*Hypericum perforatum*) noted on Mount Hualalai, Hawaii, at 6,700 feet elevation, where a GALL MIDGE (*Zeuxidiplosis giardi*) and CHRYSOMELID BEETLES (*Chrysolina* spp.) were released in 1965. Although no beetles found, light population of the gall midge was observed on few remaining plants. (Yoshioka). In July, infestations of an ARCTIID MOTH (*Selca brunella*), a flower, fruit and leaf feeder of *Melastoma malabathricum*, ranged 25-35 percent on fruits and terminals in the Kulani area, Hawaii, and averaged 43 percent on fruits at Hanahanapuni, Kauai. (Yoshioka, Sugawa). Leaf feeding larvae of a HELIODINID MOTH (*Schreckensteinia festaliella*) and a TORTRICID MOTH (*Apotoforma* sp.) very active on blackberry in the Kilauea Forest Reserve, Hawaii. This is first recovery of *S. festaliella* in this area. (Yoshioka). PUNCTUREVINE STEM WEEVIL (*Microlarinus lypriformis*) remains very active, with heavy adult emergence, in the Waikapu and Maalaea area on Maui. Native puncturevine (*Tribulus cistoides*) scarce and heavily infested wherever found. (Miyahira).

LIGHT TRAP COLLECTIONS

	Temperature °F.	Precipitation (inches)	Type of trap BL = blacklight I = incandescent MV = mercury vapor O = other	Agrotis ipsilon (black cutworm)	Estigmene acrea (saltmarsh caterpillar)	Euxoa auxiliaris (army cutworm)	Faronta diffusa (wheat head armyworm)	Feltia subterranea (granulate cutworm)	Heliothis virescens (tobacco budworm)	H. zea (bollworm, corn earworm, tomato fruitworm)	Laspeyresia pomonella (codling moth)	Loxostege commixtalis (alfalfa webworm)	Loxostege rantalis (garden webworm)	Loxostege sticticalis (beet webworm)	Manduca quinquemaculata (tomato hornworm)	Manduca sexta (tobacco hornworm)	Ostrinia nubilalis (European corn borer)	Peridroma saucia (variegated cutworm)	Pseudaletia unipuncta (armyworm)	Spodoptera exigua (beet armyworm)	Spodoptera frugiperda (fall armyworm)	Spodoptera ornithogalli (yellowstriped armyworm)	Trichoplusia ni (cabbage looper)	Crops
FLORIDA																								
Gainesville 8/18-24			BL					6	3	7						3			4		4		1	
IOWA																								
Beaconsfield 8/11-17			BL	9														1	293					
Castana 8/11-17			BL																26					
Kanawha 8/11-17			BL	12														15	407					
KANSAS																								
Garden City 8/21			BL				3											1	3				1	
Hiawatha 8/22			BL	1						8							40	2						
Wichita 8/21			BL	103			84			72							105		54		109	147	92	
KENTUCKY																								
Lexington 8/18,20,23			BL												28	63								
Monticello 8/21,22			BL	12						5					4	13			3					
MICHIGAN																								
Adrian 8/16-22			BL														99		54					
Maybee 8/14-20			BL														710		33					
Shelby 8/14-20			BL														28		23					
MINNESOTA																								
Crookston 8/16-22			BL														5		11					
Shakopee 8/16-22			BL														100		7					
Worthington 8/16-22			BL														86		5					
MISSISSIPPI (County)																								
Washington 8/18-24			2BL	7				32	39	417									11		7	12	4332	
MISSOURI																								
Portageville 8/18-24			BL	4					1	38							54	2	45		16	15		
NEBRASKA																								
Lincoln 8/24			BL	125			4			8						1	42	22	40		28	35		
North Platte 8/24			BL														7		4					
Plymouth 8/17			BL	23			21										148	8	23					
NEW HAMPSHIRE (County)																								
Strafford 8/14, 20			BL														1		4					

LIGHT TRAP COLLECTIONS

	Tempera-ture °F.	Precip-itation (inches)	Type of trap BL = blacklight I = incandescent MV = mercury vapor O = other	*Agrotis ipsilon* (black cutworm)	*Estigmene acrea* (saltmarsh caterpillar)	*Euxoa auxiliaris* (army cutworm)	*Faronta diffusa* (wheat head armyworm)	*Feltia subterranea* (granulate cutworm)	*Heliothis virescens* (tobacco budworm)	*H. zea* (bollworm, corn earworm, tomato fruitworm)	*Laspeyresia pomonella* (codling moth)	*Loxostege commixtalis* (alfalfa webworm)	*Loxostege rantalis* (garden webworm)	*Loxostege sticticalis* (beet webworm)	*Manduca quinquemaculata* (tomato hornworm)	*Manduca sexta* (tobacco hornworm)	*Ostrinia nubilalis* (European corn borer)	*Peridroma saucia* (variegated cutworm)	*Pseudaletia unipuncta* (armyworm)	*Spodoptera exigua* (beet armyworm)	*Spodoptera frugiperda* (fall armyworm)	*Spodoptera ornithogalli* (yellowstriped armyworm)	*Trichoplusia ni* (cabbage looper)	Crops
NEW JERSEY																								
Centerton 8/15-21			BL														25				1			
Englishtown 8/15-21			BL														25							
Lumberton 8/15-21			BL							5							113							
NORTH DAKOTA																								
Bismarck 8/16, 18			BL														12		10					
Fargo 8/20,22,23			BL																11					
OHIO																								
Wooster 8/18-24			BL	33													215	22	48		1	4		
OREGON (County)																								
Lane 8/17			BL	1														2						
Marion 8/17-23			BL															19						
Multnomah 8/17-23			BL															7						
PENNSYLVANIA (District)																								
Central 8/16-22			BL	2	8												9	1	13			8		
Southeast 8/16-22			BL	2	34												3		10			5		
Southwest 8/16-22			BL	1													6	2	3					
SOUTH DAKOTA (County)																								
Brookings 8/10-14			BL	8			188										220	100	248					
TENNESSEE																								
Dyer 8/21-25			BL	26				6		28						3	12		14	1		10	2	
Franklin 8/21-25			BL	3					5	11					1	1	5		21			5		
Madison 8/21-25			BL	12				2	1	5							6		23			19	18	
TEXAS																								
Waco 8/24			BL	16				76		27									42		7	3	280	
VIRGINIA																								
Montgomery 8/16-23			BL							8					3		28		14					
Petersburg 8/15-21			BL							224					38	34	160		24					
Warsaw 8/15-22			BL							30					34	16	30		37					
WISCONSIN																								
Hartford 8/15-21			BL														112		17					
Lancaster 8/15-20			BL															1	7					
Mazomanie 8/17-22			BL														196	1	4					

Weather of the week continued from page 572.

TEMPERATURE: Cooler, drier air spread into the northern Great Plains and upper Mississippi River Valley early in the week. The temperature at Jamestown, North Dakota, dropped from 92 degrees Sunday to 64 degrees Monday morning and climbed only to 68 degrees Monday afternoon. Minneapolis, Minnesota, registered 97 degrees Sunday afternoon but only 63 degrees Tuesday. By midweek, comfortable temperatures had spread southward to the central Great Plains and eastward to the upper Great Lakes. North Platte, Nebraska, recorded 41 degrees Wednesday morning. Autumn weather was also noted in the high Rockies. Big Piney, Wyoming, registered 30 degrees and Leadville, Colorado, 31 degrees Tuesday morning. The Far Southwest continued hot with afternoon temperatures climbing above 100 degrees on most days. Blythe, California, registered 116 degrees Tuesday afternoon. Early morning temperatures in the desert Southwest were generally near 80 degrees. Temperatures in the Far Northwest ranged from the 60's in the morning to the 70's and 80's on most afternoons. Central and eastern Oklahoma and nearby parts of adjoining States warmed to the 100's or higher Monday afternoon but only to the 80's on Tuesday. The Deep South continued in the 90's most afternoons. The mercury reached the 80's from the lower Great Lakes to the Middle Atlantic States most afternoons. High relative humidity over the South and East added to the discomfort caused by warm temperatures. Warm weather continued over the Northeast over the weekend. Summer heat returned to the Northwest. The Dalles, Oregon, registered 103 degrees Sunday afternoon. The northern Great Plains also warmed with afternoon temperatures near 90 degrees Sunday, 92 degrees at Bismarck and Williston, North Dakota. Temperatures averaged above normal along the Pacific coast.

BOLL WEEVIL
(Anthonomus grandis Boh.)

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1970-1971

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Prepared by Pest Survey and
Technical Support Staff

U.S. Dept. Agr.
Coop. Econ. Ins. Rpt.
22(35):589-594, 1972

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